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Implementing Sets of Institutions Using Economic Experiments: A Case with Diverse Stakeholders in Sikunga, Namibia

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Abstract

Ecosystems are complex and so are relations between stakeholders of different ecosystem services (ESS). To help a diverse group of stakeholders manage an ecosystem sustainably, a certificate-based payment for ecosystem services (PES) is useful. Manifold PES-schemes have been tested using experimental economics. Apart from empirical findings, studies as side note often concluded that economic experiments are a useful tool for educating participants on their situation and possible solutions. On a more basic level, it can even help shape the picture of the situation, so that stakeholders can level with each other. Still, economic experiments are primarily used as a tool for data collection and not taken seriously as tool for informing and educating, both stakeholders and researchers. In contrast to previous studies, our analysis aims at testing experimental economics as a tool for education and qualitative analysis. Using experiments for educational purposes is particularly useful for ESS management under a certificate-based ecosystem management scheme. A problematic ecosystem management setting often comprises a group of diverse local stakeholders and a set of resources many of which are common pool resources produced by one ecosystem. The region we chose for our experiments is the Sikunga conservancy, which is part of the Caprivi strip in Namibia. Its community just recently implemented self-management and is a candidate for a certificate-based PES. Although the ecosystem in Sikunga fulfils many services, we concentrate on three main ESS in the experiments: biodiversity, carbon mitigation and agriculture. Accordingly the participants in the economic experiments are local stakeholders of these services: farmers, tourism entrepreneurs, firewood-collecting households, administrators, and political as well as institutional leaders. Because of the experiments, local stakeholders were successfully brought to new insights into challenges connected to the management of their ecosystem. While proposing possible solutions, locals as well as us outside researchers gained insights into matters of governing and other qualitative information otherwise hardly attainable. Though it was not the goal of our experiments, we can also report that experiments for educational purposes do not lose their validity as data collection tool, although trade-offs between data quantity and experiment depth have to be made.

Keywords: Management of ecosystems, Namibia, PES, qualitative analysis